UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

IN RE TERRORIST ATTACKS ON SEPTEMBER 11, 2001	Civil Action No. 1:03 MDL 1570 (GBD) (FM)
ALICE HOGLAN, *et al.*, Plaintiffs, v. **THE ISLAMIC REPUBLIC OF IRAN**, *et al.*, Defendants.	This Document Relates to **1:11 Civ. 7550 (GBD) (FM)**

PLAINTIFFS' DAMAGES INQUEST MEMORANDUM

EXHIBIT D

EXPERT REPORT OF REAR ADMIRAL ALBERTO DIAZ, M.D. (*U.S. NAVY, RET.*)

Qualifications, Other Deposition Testimony

I am a physician licensed in the State of Maryland and a Board Certified Psychiatrist (Certified by the American Board of Psychiatry and Neurology). I retired from the United States Navy on 1 July 2003 at the rank of Rear Admiral (two stars/0-8) after more than 27 years of active service. My credentials and experience are set forth in the curriculum vitae, attached hereto.

Compensation

I am being paid $300 per hour. In regards to this specific case, I was first retained by the Mellon, Webster and Shelley Law Firm on 27 January 2012.

Prior Expert Testimony

Within the last seven years I have testified by deposition in a number of other cases for the Wolk Law firm (Philadelphia) and in the 6 years before that in a Navy Inspector General investigation regarding a past Navy Surgeon General. I have had no trial testimony within that time frame, but was the presiding officer at numerous (too numerous to count) "Non Judicial Punishment" proceeding and was the Convening Authority for several Courts Martial. I was also the senior Navy Medical Department Representative in the investigation conducted by U.S. Naval authorities into the accidental shooting down of an Iranian Airbus by the USS Vincennes on 3July 1988.

Documents, Interviews, Reports, Correspondence and Materials Used In The Formulation of Opinions and Findings

My Experience, Background, Education and Training

Review of documents and reports pertaining to the events of 11 September 2001

Current Professional Literature Reference List (including Journal Articles and Reference Texts.

C/o Thomas Mellon, Jr., Esquire
Mellon, Webster & Shelley
87 North Broad St.
Doylestown, PA 18901

Re: Havlish, et al. v. Bin Laden and the Islamic Republic of Iran, et al.

Statement: The following report constitutes a summary of the pertinent facts and findings, and my professional opinion regarding this case. Specifically, I have been requested to evaluate the records and assess the degree and nature of the physical and psychological suffering experienced by victims of the 9/11 attacks and the lasting psychological impact on survivors and loved ones. In preparing the report, I have reviewed all the available documents, reports, and records. I have drawn upon my extensive clinical experience and knowledge of the medical literature regarding the physiology and psychology of fear, severe pain, trauma, and the enduring effects on survivors, family, and friends.

Case History: In essence, Islamic terrorists hijacked four large commercial passenger planes fully loaded with sufficient fuel for a transcontinental flight and used these as improvised missiles to launch an attack against targets within the United States of America with high symbolic and cultural values. Specifically, they crashed them into the two towers of the World Trade Center in New York City, the Pentagon in the Washington, D.C. area, and into a field in Shanksville, PA., (The latter has since been determined to have targeted either the White House or the Capitol Building.) The attacks left 2,996 people dead and thousands more injured; huge numbers with permanent disabling conditions. The psychological toll amongst the survivors and loved ones is part of the enduring legacy of this tragedy. The express purpose of this "operation" was to achieve the highest possible human toll in terms of lives lost, injuries sustained and lasting psychological trauma. It also sought to maximize human suffering through the incredibly cruel and horrific means of death and the prolongation of that suffering. Particularly vicious was the public nature of the victims' agony, which was to be seen and felt by loved ones and would become indelibly imprinted in their psyche, with devastating consequences.

Backgound: As we seek to understand the intensely personal experiences of the victims, it is perhaps necessary that we review the neurophysiology and psychology of extreme fear and impending doom. The so-called "fear circuit" in the brain has its origins in a central part of that organ called the *amygdala*. Specific neural pathways which mediate the feelings of intense dread, anxiety, fear and panic emanate downward from the central amygdala. These systems and responses are "not speculative or fanciful," and "are experimentally reproducible." (Panksepp, 1998). The physiological response to fear (in particular extreme fear) includes an increased heart rate (sometimes feeling as if your heart was going to "jump out of your chest"), elevated blood pressure, drying of the mouth, trembling, sweating, blanching, feelings of faintness, nausea and vomiting, and a general homeostatic disregulation As the threat continues, there are hormonal

changes as cortisol and adrenalin begin to surge through the system, causing tunnel vision and making the victim feel increasingly confused, disorganizing thought processes further and impairing fine motor control and hearing faculties. If there is no relief, then loss of control of sphincters ensues, with urinary incontinence and involuntary defecation. Ultimately, "dying of fright," is a very real physiological possibility, particularly among the weaker or infirm victims. For some of the victims, these reactions were infinitely and cruelly compounded and exacerbated by extreme and unrelenting pain from physical injuries of all types, including severe burns, crush injuries, fractures, traumatic amputations, disembowelments, and pulmonary complications from smoke and toxic fumes which inflame the inner lining of the lungs and interfere with breathing and respiration.

The psychological effects of extreme fear and fright are equally dreadful. Overwhelming fear leads to overwhelming anxiety, which many have described as feeling "near death." Subjectively, overwhelming anxiety is the most intense and dreadful feeling a human being can experience. Unrelenting, extreme anxiety leads to a general cognitive "meltdown," Once "flight or fight" becomes clearly impossible, the mind is, for all intents and purposes, immobilized. This "quiescence" had evolutionary value in order to freeze the individual in an unexpected encounter with a dangerous predator, but in the modern world it compounds the dangers and threats surrounding the individual. Quiescence does not imply merciful "numbness," only a physical impossibility to react to the threat. Some authors often refer to the "parallel mind of fear." Another consequence of this type of overwhelming stress is "tachypsia." As if experiencing the aforegoing was not enough, nature compounds the pain by subjectively slowing time down. What may transpire over the course of a few seconds may be experienced as happening in very slow motion, thus prolonging the agony. Extreme fear and anxiety is an experience that very few of us can relate to, but, from the descriptions above, we can at least obtain a glimpse into the tortured and desperate minds of the victims.

A further word is also in order regarding the amygdala and the "fear networks." The signals from the amygada represent inaccessible learned memories (and possibly inherited instinctual associations) and the body and brain's response is immediate and impossible to resist. It is said that the signals from the amygdale trump all other higher cognitive functions. The only way that serious alarm signals from the "fear network" can be held in some abeyance is through intense and repetitive training, such as the military, law enforcement, and rescue personnel undergo. (for ordinary minor "threats" the frontal lobes "reassure" the amygdala that all is under control and the fear response abates) Responses to severe threats are then processed through prefrontal and hippocampal circuitry, also at a preconscious level. These artificially ingrained behaviors then take front and center stage automatically in a threat situation. It explains why rescue personnel of all types were able to perform heroically despite experiencing (physically and subjectively) exactly the same horrible threats to their life and sanity.

United Airlines Flight 175 and American Airlines Flight 11:

Both flights originated in Boston and were full of fuel for the transcontinental flight to Los Angeles. AA 11 departed Logan at 08:20 in the AM with 11 crew, 53 passengers and (unbeknownst to them) 5 Islamic terrorist determined to immolate themselves, the passengers and crew, and thousands more on the ground, all in the name of Islam. At approximately 08:14, as the aircraft passed 25,000 ft, the terrorists stabbed two flight attendants and slashed the throat

of a business class passenger who attempted to assist the latter. They then gained entrance into the cockpit through means unknown and seized control of the aircraft. They threatened passengers and crew with detonating a bomb and also used Mace and/or pepper spray for emphasis. Two flight attendants (Betty Ong and Madeline Sweeny) contacted the ground via cell phone and were able to describe the on-going situation. At 08:18 the plane entered a "rapid descent" and began to move erratically; at 08:19, Ms Sweeny stated "we can't breathe" (apparently because of the Mace or pepper spray being used). Finally at 08:44 Ms Ong reported that "We are flying very, very low! We are flying way too low! ***Oh my God, we are way too low!!"*** A few seconds later she was consumed by the exploding fireball resulting from the high speed impact with the North Tower of the World Trade Center.

UA 175 also departed Logan Airport in Boston en route to Los Angeles with 9 crew, and 51 passengers, not including 5 terrorists. Takeoff was noted at 08:14 and it reached its cruising altitude of 31,000 feet by 08:33. Sometime after 08:22 the terrorists attacked, stabbing a flight attendant and killing both flight crewmembers. Cell phone reports from two passengers and a flight attendant revealed a similar threat of a bomb and the use of Mace. There was some initial talk amongst the passengers of taking action against the hijackers, but it did not lead to fruition. At 09:00 a passenger aboard UA 175 (Peter Hanson) called his father to say goodbye. Among his last words were *"Its getting very bad on the plane……passengers are throwing up and getting sick…..The plane is making jerky movements….I think we are going down……I think they intend to fly to Chicago or someplace and fly into a building……****My God…..my God!!****"* Immediately thereafter, he and all aboard were thrust into oblivion as the plane was flown into the South Tower. The time was 09:03.

It is clear that both planes descended extremely rapidly, intentionally picking up speed to maximize destructive energy. They were flying very erratically, particularly AA 11 as it flew among the skyscrapers of New York City. Videos of AA 11 capture the sound of the engines as they roar to full throttle just before impact. UA 175 is seen initiating a hard roll and turn to the left as the pilot tries to ensure that the plane would strike the intended target. It is difficult to estimate the induced "G" forces, but they must have added significantly to the victims' dread and terror in those last few moments. Noteworthy is the "quiescence" (as noted in the prior section) of most of the passengers in the initial moments of the hijacking, followed by confusion and inability to focus and develop a plan of action, despite awareness that destruction was imminently at hand. The trained cabin crew did a commendable job under unbelievably stressful conditions and was able to suppress some of the signals from the amydala and the "fear network," but as their training did not involve action, they remained essentially passive reporters of their own demise. Mr. Hanson provides the most harrowing description of the conditions undoubtedly aboard both aircraft. *"Getting very bad……passengers are getting sick and throwing up…..I think we are going down….My God…..my God!!"*

Although the aircraft jerky movements may have contributed to airsickness in a few isolated cases, we know from experience that the bad weather conditions will not produce the kind of mass "sickness" described by Mr. Hanson. He is describing the physiological end result of absolute and abject terror, the kind that makes up our very worst nightmares. Of note is both Ms Ong's and Mr. Hanson's call to God as their final words. They knew with absolute certainty that this would be the end of their existence; their hopes and dreams, everything they were and had been, and even at the absolute end, fear of the "great unknown." All of those aboard were certainly exquisitely aware that there would be no deliverance and of the fear that there would